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An Essay

on the
History, Symptoms, Causes

and

Treatment

of

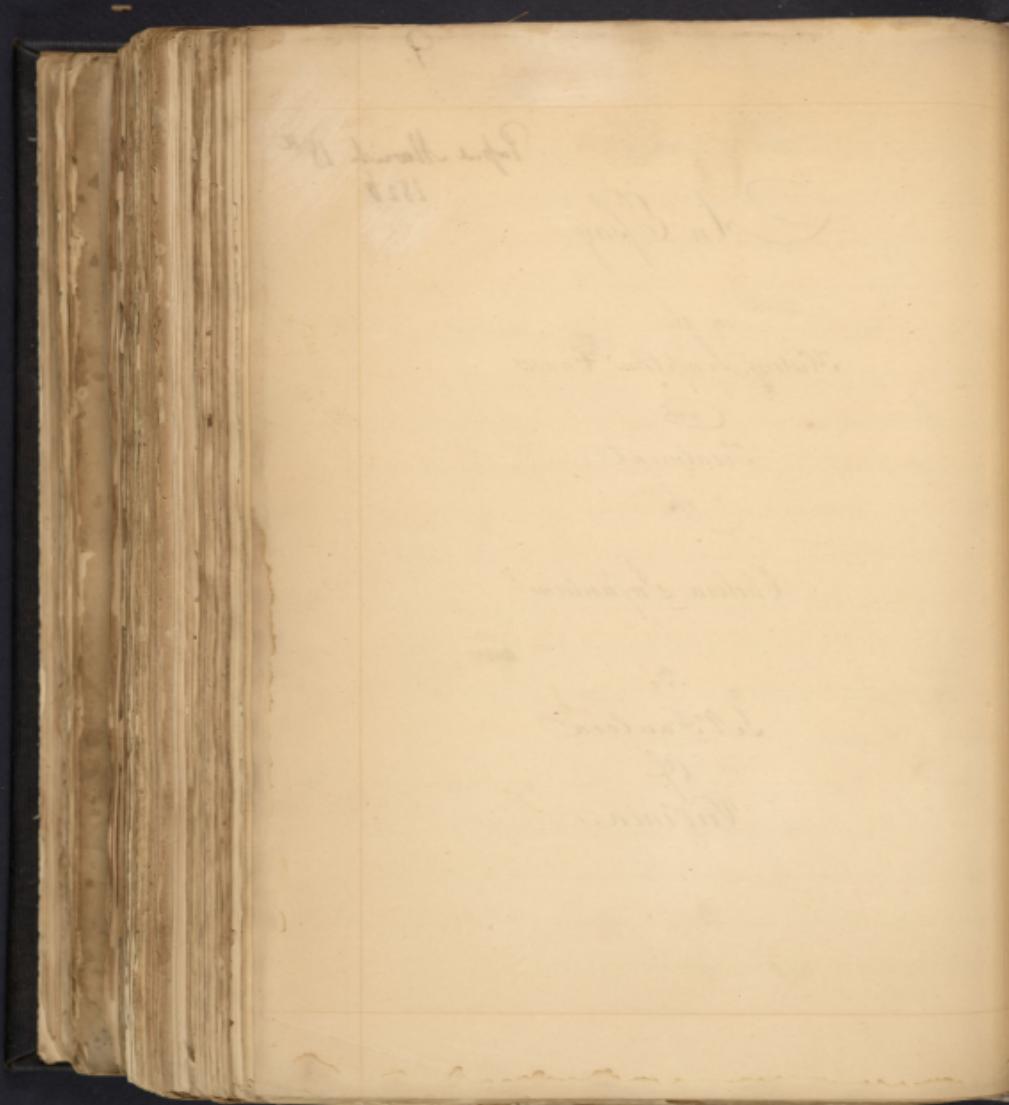
Cholera Infantum

By

J. W. Faulcon

of

Virginia.



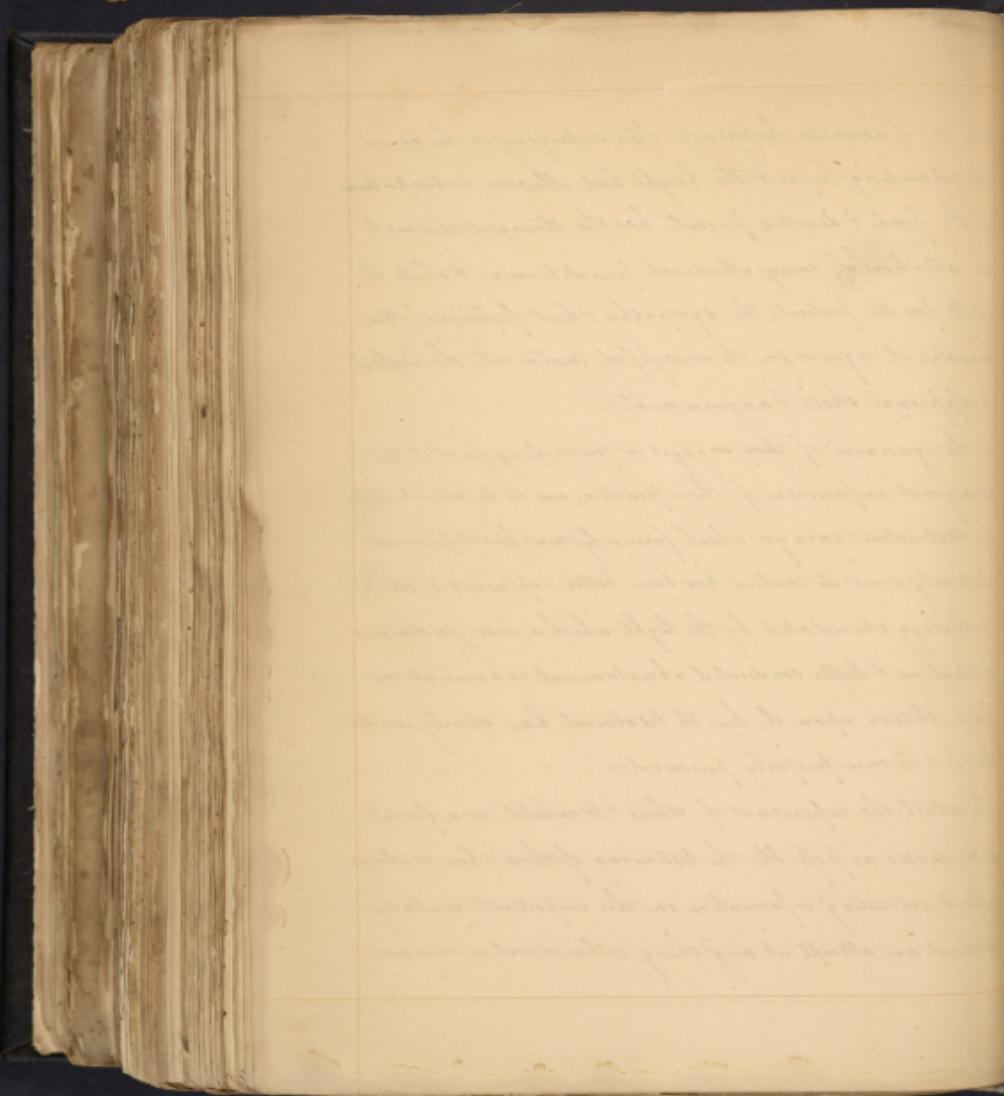
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In the extensive Catalogue of diseases to which we become liable as we advance from Infancy to decrepitude, there are few perhaps, which cause more distress to the patient or more frequent disappointment to the physician, than Cholera Infantum? As its name imports, this disease is confined (exclusively) to the most tender & helpless portion of our species. Incapable, from the delicacy of their frames & the ^{thin} frailty of ^{their} constitutions of successfully resisting the depraving influence of any morbid action, this never fails to prove to them a calamity of the most alarming & dangerous character. Commencing its attack at a very early age, it seems as a merciless Destroyer, to delight in preying upon the weakness of its victims & sacrificing to its rapacity, the most interesting objects of our care. A disease so formidable & so frequent, & which from its fatality strikes so directly at

the rest of domestic happiness, often destroying in the mind the expanding hopes & the bright but illusive anticipations of the fond & devoted parent, has the strongest claims to the attention of every Medical practitioner. & while it excites for the patient, the sympathy & best feelings of humanity, it requires for its successful treatment, the highest, professional skill & acquirement.

To the ignorance of those engaged in prescribing for it, & the consequent empiricism of their practice, are to be attributed the destructive ravages which formerly marked its presence. And only since its nature has been better explained & its pathology elucidated by the light which a more judicious iteration & better conducted anatomical examinations have thrown upon it, has its treatment been clearly understood & its cure properly pursued.

To detail the experience of others & to exhibit in a form as condensed as possible, the testimony of those whose writings afford interesting information on this important malady, without an attempt at anything either novel or original,



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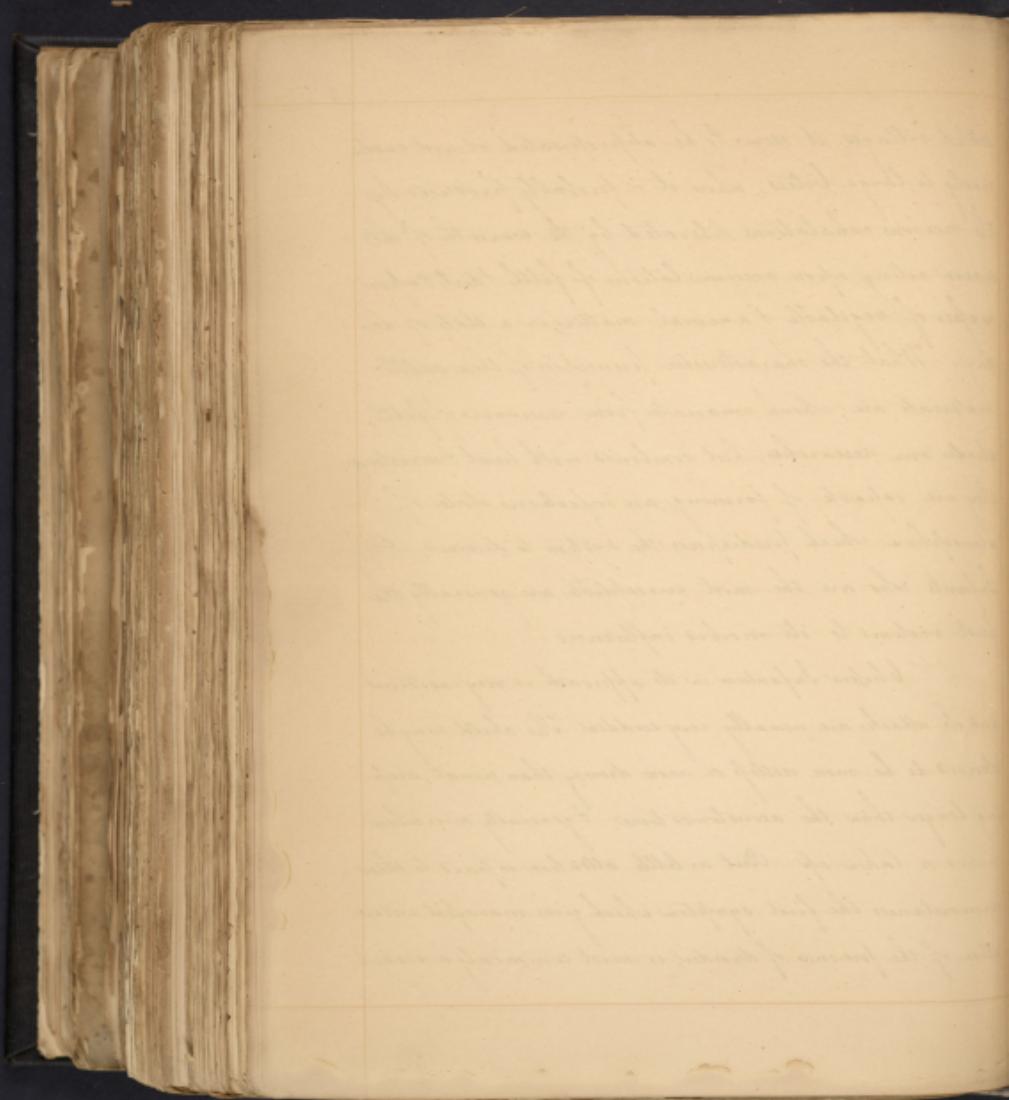
is the object of the following Essay.

By *Cholera Infantum*,

we mean a disease, which formerly designated by various appellations, is now pretty generally known as the "Summer complaint of Children". It usually makes its appearance about the middle of June or the first of July, & often continues until the frosty weather of September or October. The period of its commencement however depends much upon the heat of the weather: & the danger arising from it is said to be greater or less, as the mercury of the Thermometer stands higher or lower. Children may be affected at any time between the first & second week after their birth & the termination of their second year; but it most commonly seizes upon them from the age of five to that of eighteen or twenty months. It seems not to be confined to any particular rank, but visits in its malignity equally the offspring of the wealthy & luxurious inmate of the Drawing-room, as that of the poor & equalized tenant of a cellar occurring rarely in County places, or in small & thinly

settled villages, it seems to be appropriated almost exclusively to large Cities; where it is probably produced by the noxious exhalations liberated by the warmth of the season acting upon accumulations of filth & dirt & upon masses of vegetable & animal matter, in a state of decay. What the characteristic principles of these subtle materials are, which emanate from reservoirs of filth, eludes our researches; but combined with heat & moisture they are capable of forming an infectious state of atmosphere which predisposes the system to disease; & Infants who are the most susceptible are generally the first victims to its morbid influence.

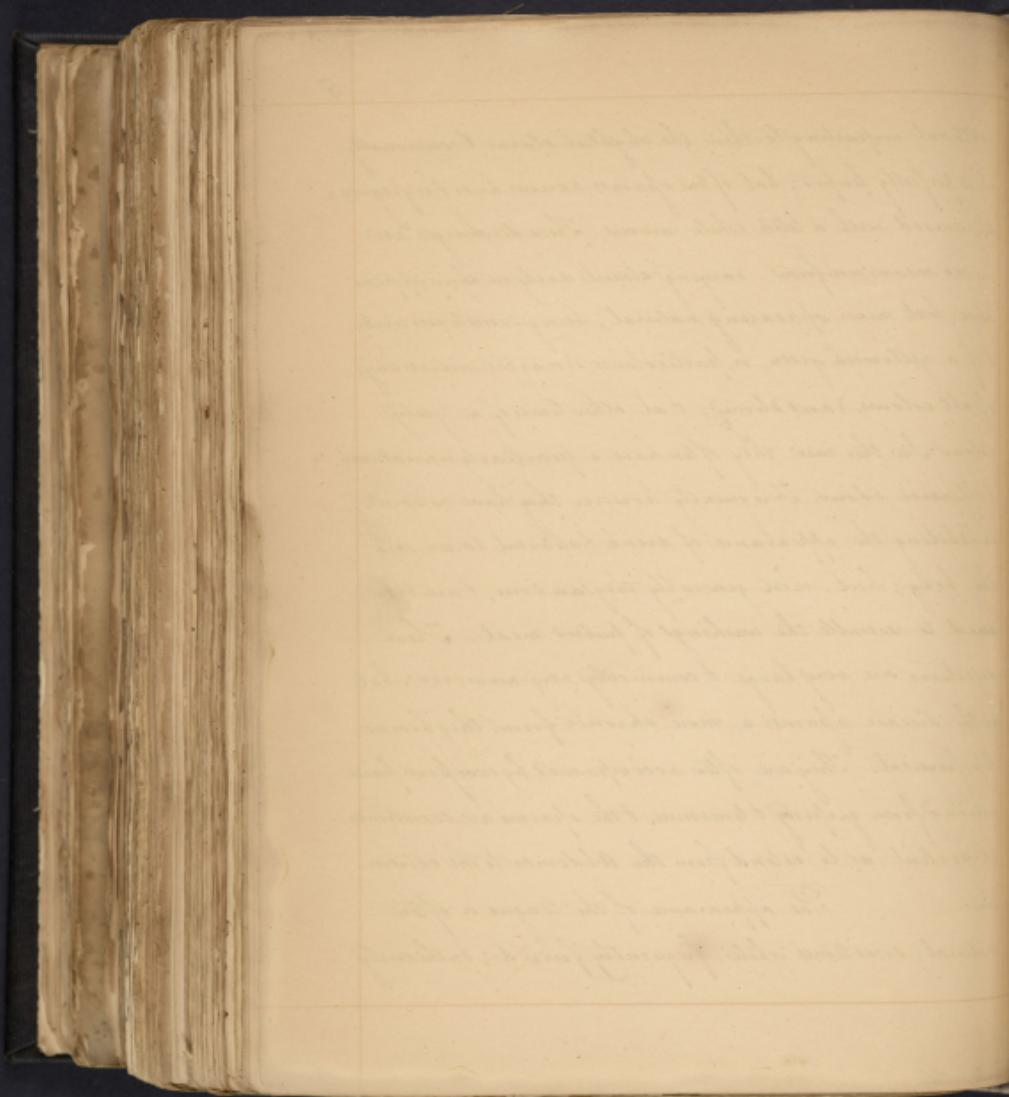
Cholera Infantum in its approach is very insidious and its attacks are usually very sudden. The child may be observed to be more restless or more drowsy than usual, sleeping longer than the accustomed time, & generally cries when moved or taken up. But as little attention is paid to these circumstances the first symptom which gives manifest indication of the procrea of disorder, is most commonly a violent



vomiting accompanied by the usual phenomena of febrile excitement. Sometimes the disease commences with Diarrhea, which continues for several days without exhibiting any other mark of indisposition. Frequently however, the vomiting & purging begin simultaneously: & this I believe is found to be most generally the case. They often alternate; but commonly, the former soon ceases & the latter continues throughout the disease. The matter thrown up from the Stomach at first consists, of nothing more than the maternal milk or other food in a state of acidity, sometimes mixed with slime or glairy mucus which continues to be ejected after the alimentary matter is evacuated. The alvine discharges are at first composed principally of a thin, watery, yellow or greenish fluid, with occasional lumps of faecal matter; sometimes, they are of greater consistence & of more natural appearance, & sometimes are accompanied by a copious flow of Bile. Soon however, they lose this character, and then consist entirely of the watery fluid above mentioned, which is so extremely thin as to run thro' the diapers about

without imparting to them the slightest stain. Occasionally it is perfectly limpid: but often assumes various hues & is frequently mixed with a little white mucus. These discharges are by no means uniform: varying almost daily in their appearance, but never appearing natural, being sometimes dusky of a yellowish green, or, particoloured (or, as the nurses say, of all colours,) and slimy; & at other times of a yeasty colour. In this case, they often have a peculiarly unnatural offensive odour. Frequently however they have no smell, exhibiting the appearance of drink & aliment taken into the body; but, most generally they are sour, & are then said to resemble the washings of putrid meat. These dejections are very large & commonly very numerous; but as the disease assumes a more chronic form, they become less frequent. They are often accompanied by excessive pain arising from gripping & tenesmus; & the spasms are sometimes so violent as to extend from the Abdomen to the extremities.

The appearance of the tongue is often natural: sometimes white, frequently furred; in the early



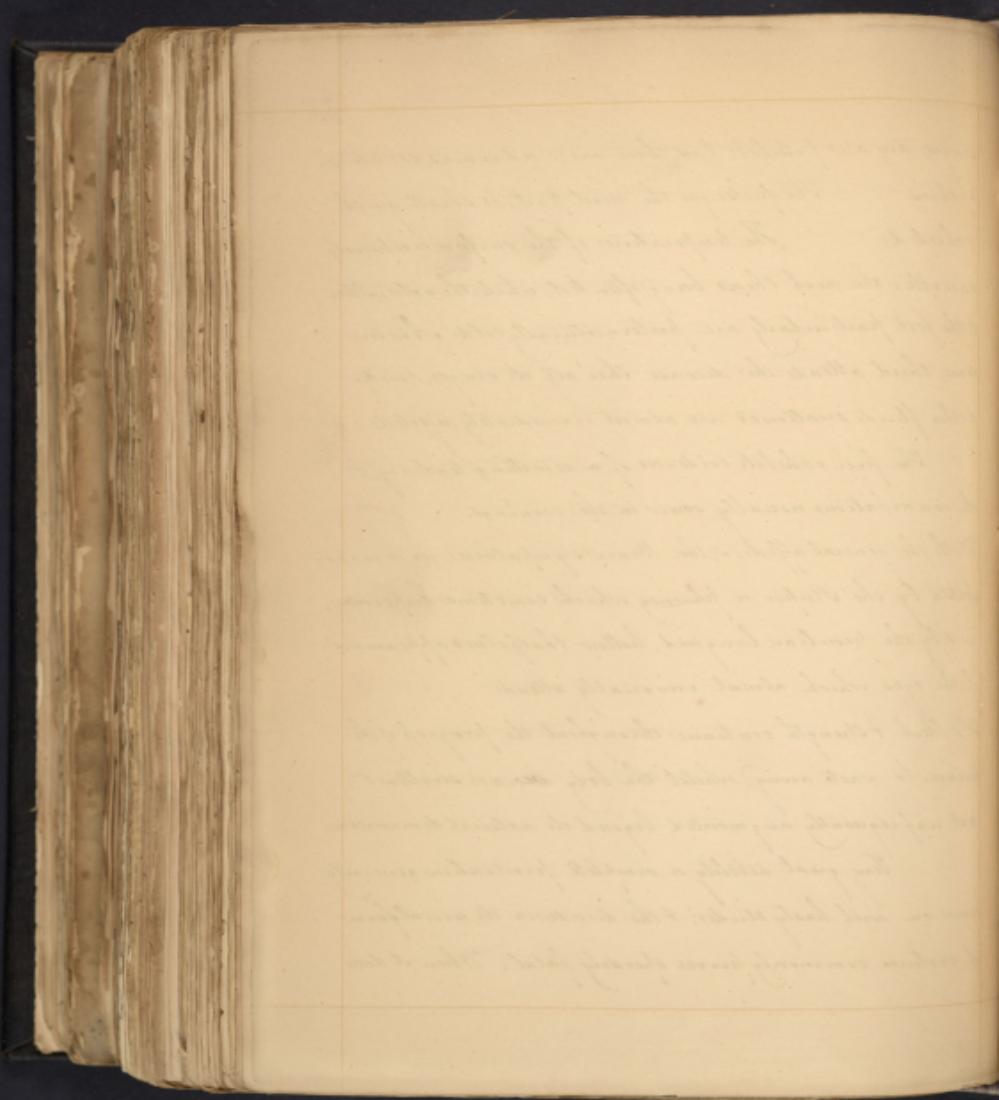
stages, dry and polished; & in those more advanced, sometimes, aphorbs. The pulse for the most part, is small, quick & shorted. The temperature of the surface is extremely variable; the neck & head being often hot, while the extremities & the feet particularly are proportionately cold. An intense thirst attends the disease thro' all its stages, & water & other fluids swallowed are almost immediately rejected.

The fever exhibits evidences of a remitting tendency, & the exacerbations usually occur in the evenings.

With the general affection, the Brain's sympathises, as is manifested by the Stupor or phrensy which sometimes supervenes, and by the peculiar, languid, hollow half closed appearance of the eyes which almost invariably attends.

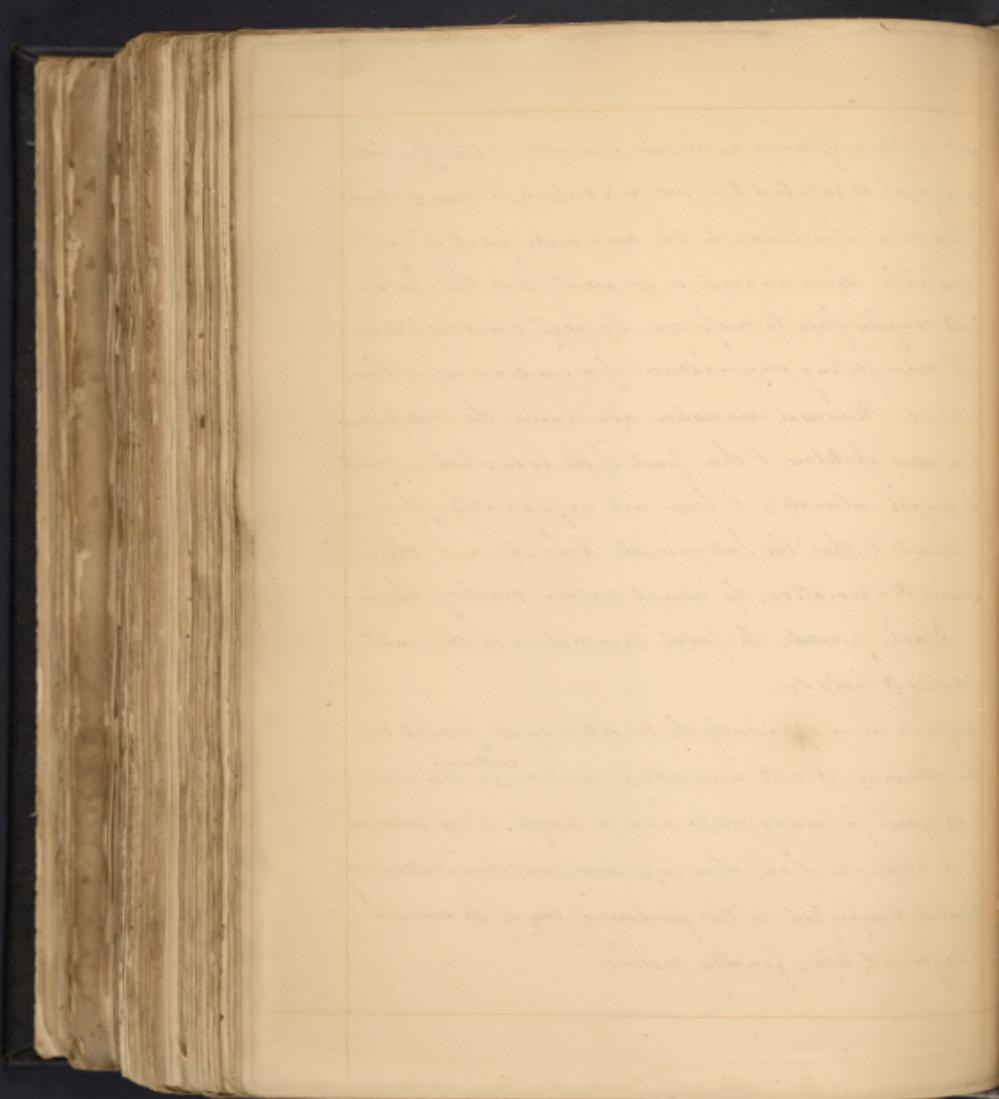
The flesh & strength continue throughout the progress of the disease to waste away, whilst the body becomes swollen & not unfrequently augmented beyond its natural dimensions.

Very great debility or complete prostration generally comes on with hasty strides; & the dissolution in its usual form of violence commonly proves speedily fatal. When it does



not, it then assumes a chronic character, & the approach of a final dissolution tho' not less certain, is more gradual. There is at this stage of the complaint, great loss of sensibility which indeed is so great, that the child will suffer flies to crawl over its half-closed eyelids without manifesting any evidence of a consciousness of their presence. Universal emaciation now reduces the little patient to a mere skeleton, & those parts of the body which support its weight, ulcerate, & bones not unfrequently appear protruded thro' the integuments. Convulsions & the facies agitata, the almost certain mark of the hand of death, precede the fatal termination of this most distressing malady.

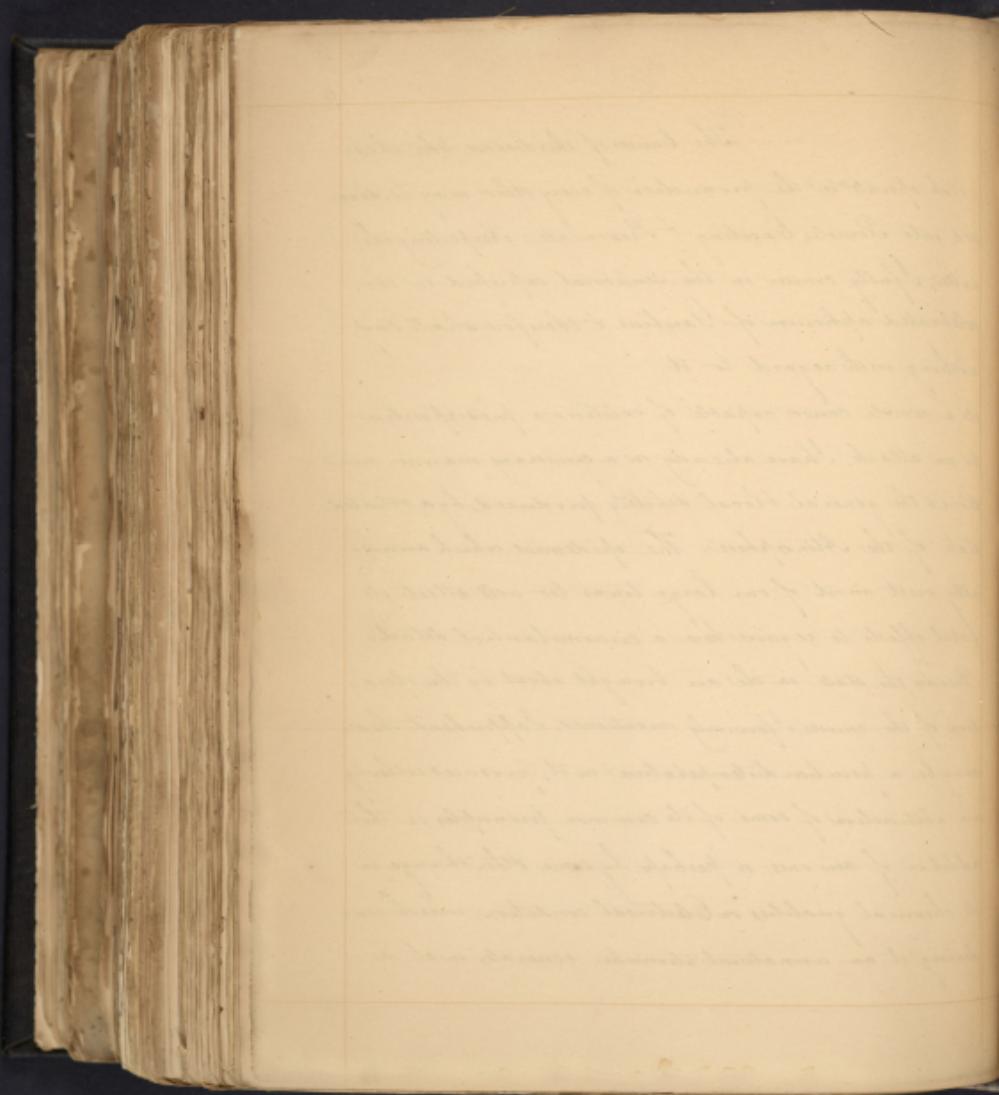
Desperate as is apparently the condition of the patient in this extremity, it will nevertheless sometimes ^{continues} in this state to languish for many weeks: and at length to the astonishment & delight of all whose hopes have been so long alternately elevated & depressed by the flickering ray of its almost extinguished life, finally recover.



The Causes of this disease like those
which operate in the production of every other, may be di-
vided into Remote, Exciting & Proximate. Respecting the
latter, I fully concur in the sentiment expressed in the
celebrated aphorism of Gaubius, & therefore shall say
nothing with regard to it.

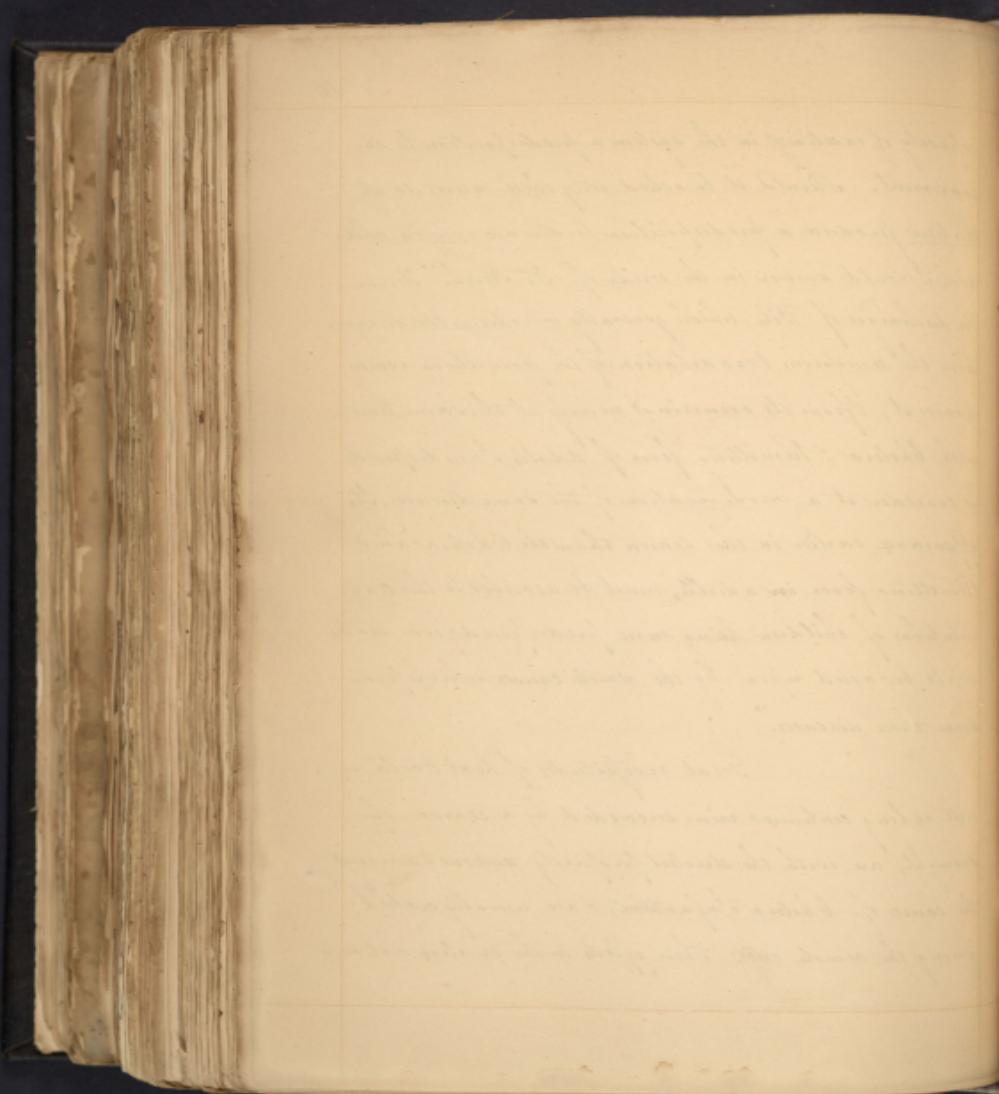
As a remote cause capable of exciting a predisposition
to an attack, I have already in a cursory manner men-
tioned the general & local solicitude produced by a situated
state of the Atmosphere. The epidemics which annu-
ally visit most of our large towns, too well attest its
fatal effects to require here a circumstantial detail.

Beside the state in the air brought about by the opera-
tion of the causes formerly mentioned, I apprehend there
may be a peculiar distemperature in it, produced either by
an abstraction of some of its common principles or the
addition of new ones, or perhaps, by some other change in
its chemical qualities or Electrical condition, which con-
sidering it an unnatural stimulus, generates on it a

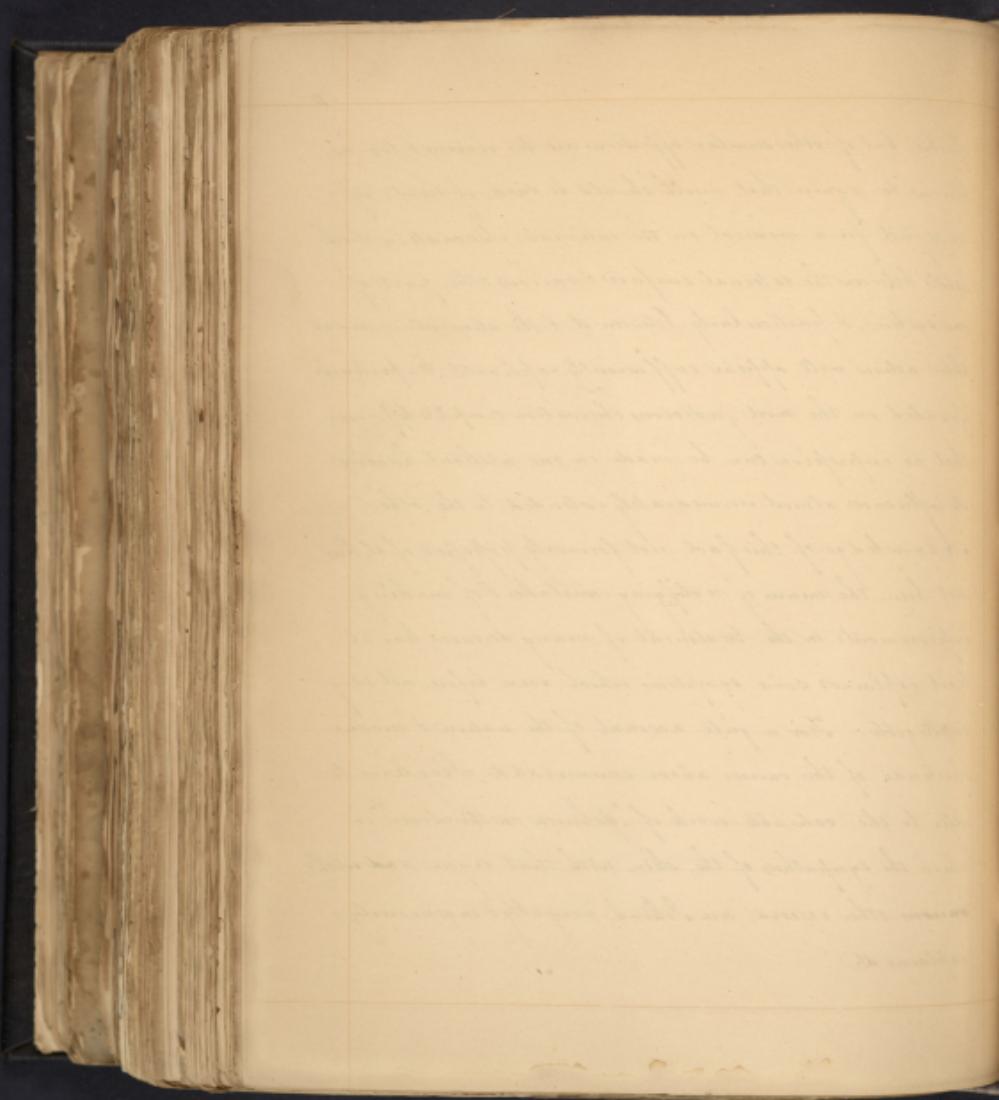


capacity of exciting in the system a predisposition to danger. Should it be asked why these causes do at this time produce a predisposition to disease only in children, I would answer in the words of Dr. Rush, "From the discharges of Bile which generally introduces the disease, from the rumification & exacerbations of the fever which accompanies it, & from its occurring nearly at the same time with Cholera & Remitting fever of adults, I am disposed to consider it a modification of the same disease. Its appearance earlier in the season than the Cholera and Remitting fever in adults, must be ascribed to the constitutions of children being more predisposed from weakness to be acted upon by the remote causes which produce those diseases."

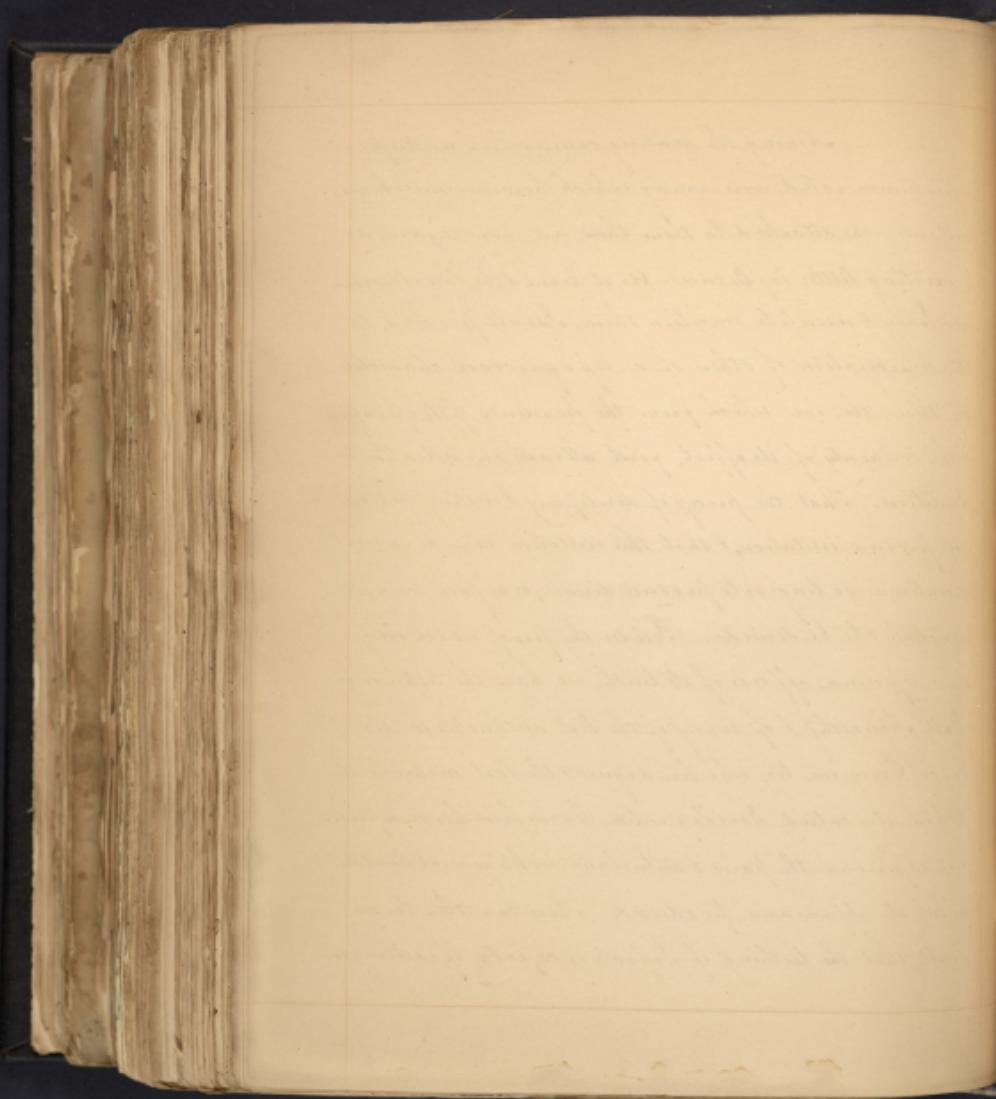
Great vicissitudes of heat & cold, as well as long continued rains succeeded by a season of drought, are with the strictest propriety reckoned among the causes of Cholera & infantum, & are usually classed among the remote ones. Their effects in the creation not only



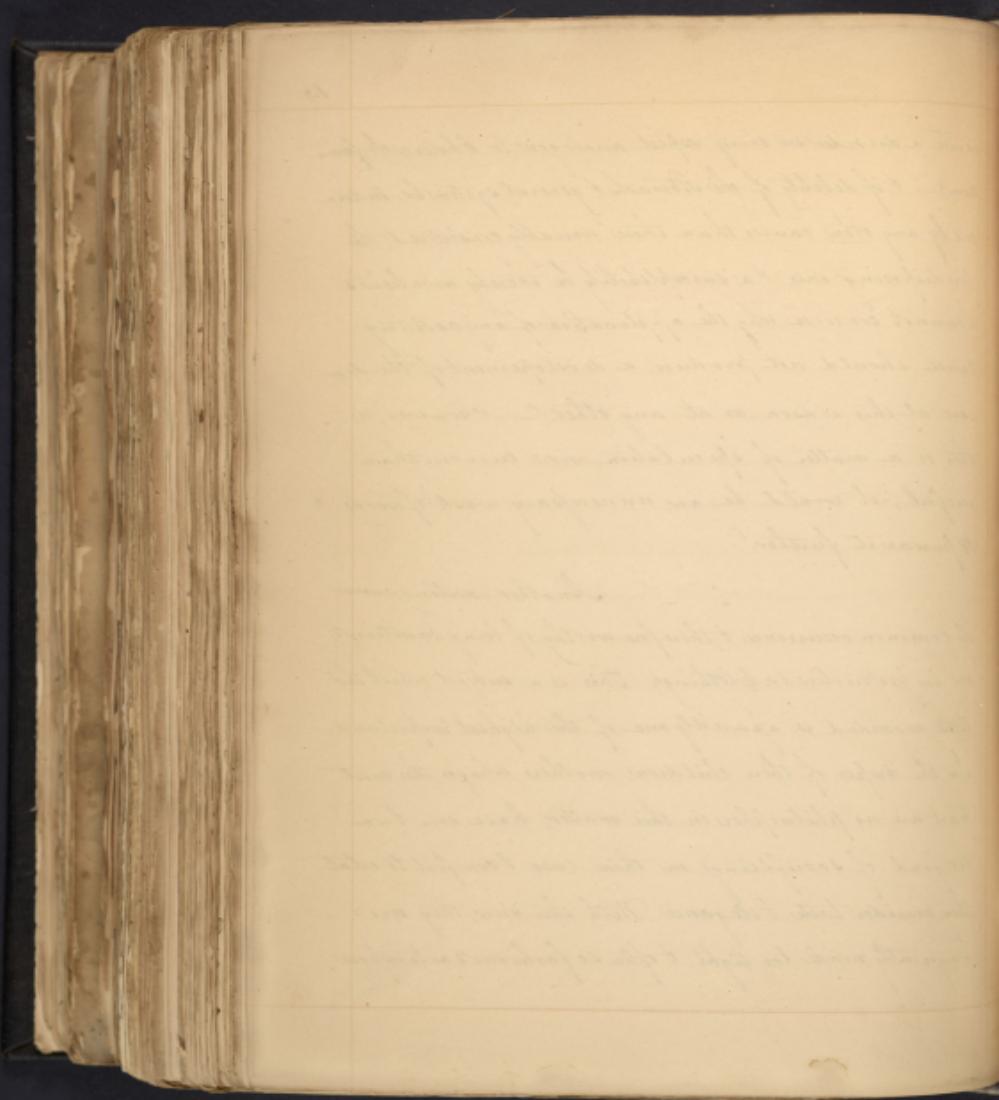
of this, but of other similar affections are too obvious & too notorious to require that much should be said of them. If we reflect for a moment on the intimate association which exists between the external surface & various other parts of our systems, & particularly between it & the alimentary canal, their action will appear sufficiently explicable. Experience founded on the most judicious observation completely proves, that no impression can be made on one without having its influence almost immediately extended to the other. A knowledge of this fact not formerly possessed, if it has not been the means of rectifying mistakes & of making improvements in the treatment of many diseases, has at least explained some symptoms which were before not very intelligible. For a full account of the nature & modus operandi of the causes above enumerated, I beg leave to refer to the valuable work of "Johnson on the Liver," in which the sympathies of the skin with that organ and with various other viscera, are I think very ably & ingeniously explained.



Among the existing causes which writers formerly enumerated, were many which however much importance was attached to them then, are now regarded as exerting little influence. As it would be equally unnecessary & useless to mention them, I shall proceed to the consideration of others of a less equivocal character. Of these, the one which from the frequency of its operation & the certainty of its effect, first attracts our attention is Dentition. That the process of developing & cutting the teeth does produce irritation, & that this irritation may be so great a continuo so long as to produce disease, is a fact too well established to be denied. Besides the proof which every day's experience affords of its truth, we have the testimony of all Abundant & of many of the best authorities in its favor. Every one too, who has acquired the last molar tooth technically called *Dens apicentia*, knows from his own personal experience the pains & disturbance in his general health which its appearance produced. There can then be no doubt, that the teething of Infants is capable of exciting in

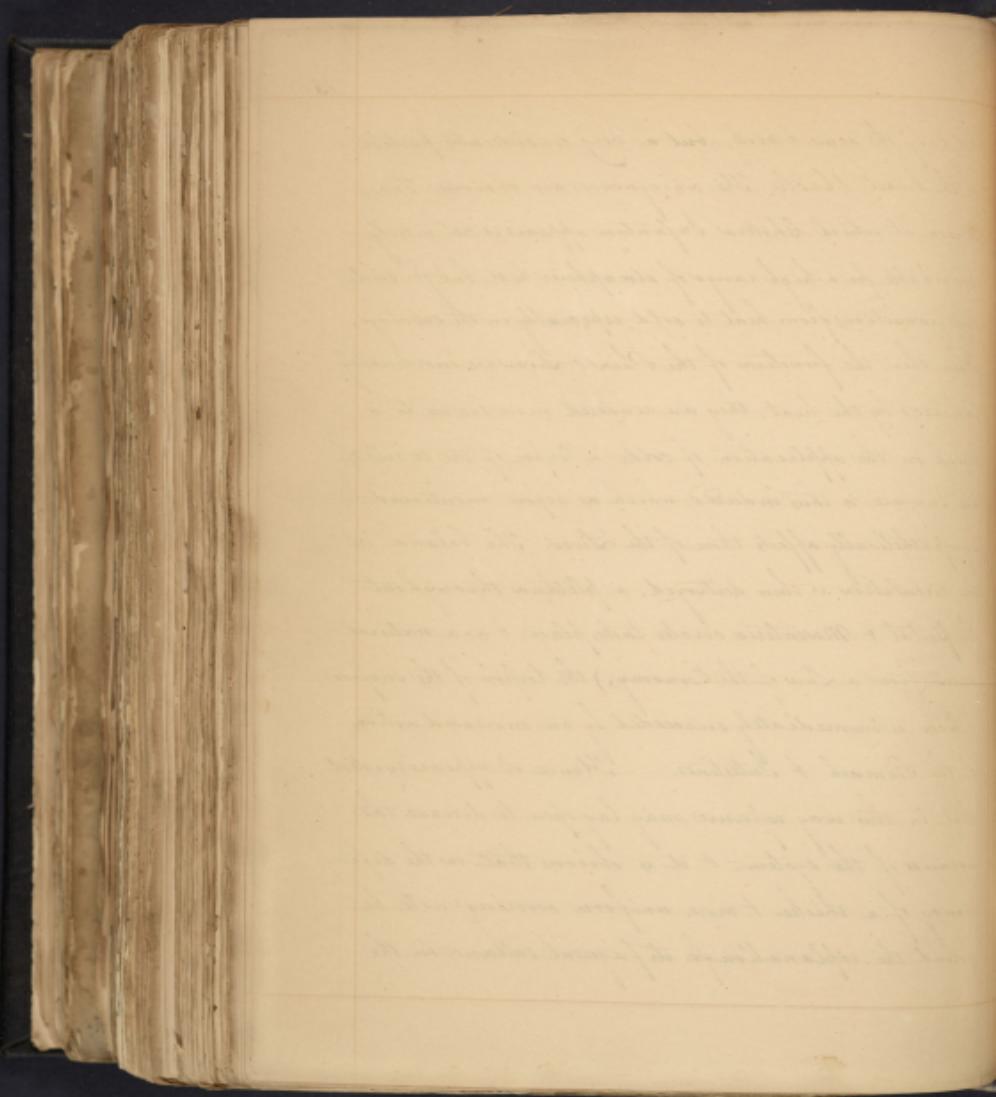


them also, a train of disordered actions. The explanations of which is certainly not very difficult. The communication between the mouth & the Stomach being (a continuous surface) the irritation & inflammatory action of the gums are directly extended to that organ, producing in it a necessary consequence, functional derangement. This on its turn produces similar effects upon other organs, upon the Intestinal canal & Liver more particularly. It is as we shall hear after this, in a disorder of the functions of these viscera, that the disease we are treating of consists. As this state of things would be liable to occur from this cause at any season of the year, in the cold of Winter as well as in the heat of Summer it would appear that teething may prove at the same time both a predisposing and an exciting cause of the Complaint; & consequently that instead of being confined to one season, it might appear at any. It is far from my intention to enter here into any discussion on this point, but I think it will not be denied that the irritation of teething does occasionally even in Winter

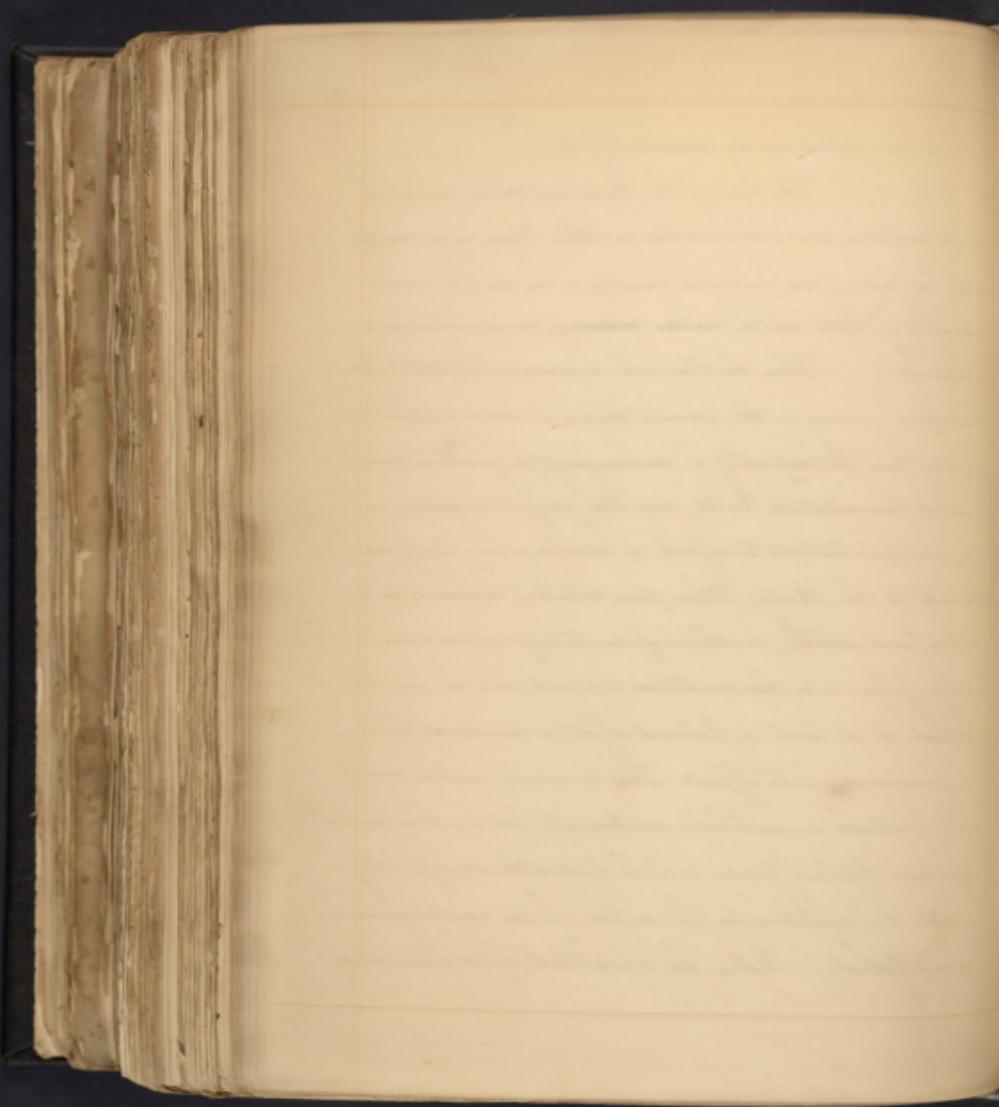


excite a disorder in every respect analogous to Cholera infantum, & if debility of the Stomach & general system be induced by any other causes than those usually considered, the predisposing ones, & a susceptibility be thereby awakened. I cannot conceive why the application of any exciting cause should not produce a development of the disease at this season as at any other? — However, as this is a matter of speculation more curious than useful, it would be an unnecessary waste of words to pursue it further.

Another exciting cause of common occurrence & therefore worthy of being mentioned, are improprieties in Clothings. This is a subject which tho' little regarded is assuredly one of the highest importance. In the dress of their children, mothers, who for the most part are no philosophers in this matter, have ever been too fond of sacrificing on them ease & comfort to what they consider taste & elegance. With this view, they are frequently made too light, & often so fashioned as to expose

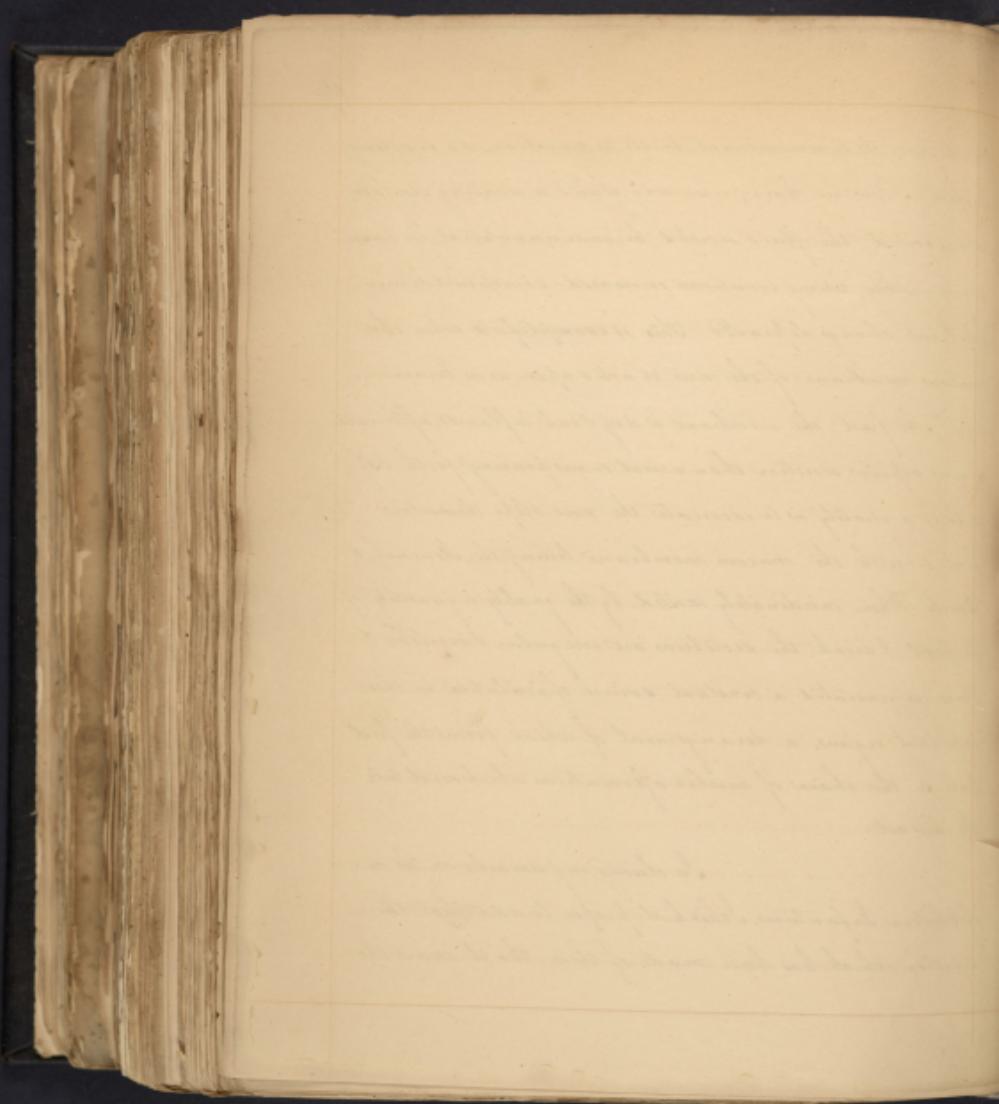


not only the arms & neck, but a very considerable portion of the breast & back. The consequences are obvious. The season at which Cholera Infantum appears is not merely remarkable for a high range of atmospheric heat, but for sudden transitions from heat to cold, especially in the evenings. Then then, the functions of the Heart & Liver are inordinately increased by the heat, they are rendered more liable to a check on the application of cold; a torpor of the vessels of the surface is thus induced, which as before mentioned, sympathetically affects those of the Liver. The balance in the circulation is thus destroyed, a plethora throughout the Portal & Mesenteric circles takes place, & as a natural result (from a law of the Economy,) the torpor of the surface & Liver is immediately succeeded by an increased action of the Stomach & Intestines. Hence it appears evident, that in this way exposure may lay open to disease the avenues of the system; & it is obvious that in theconomy of a thicker & more uniform covering will be found the explanation for its frequent enhance in the



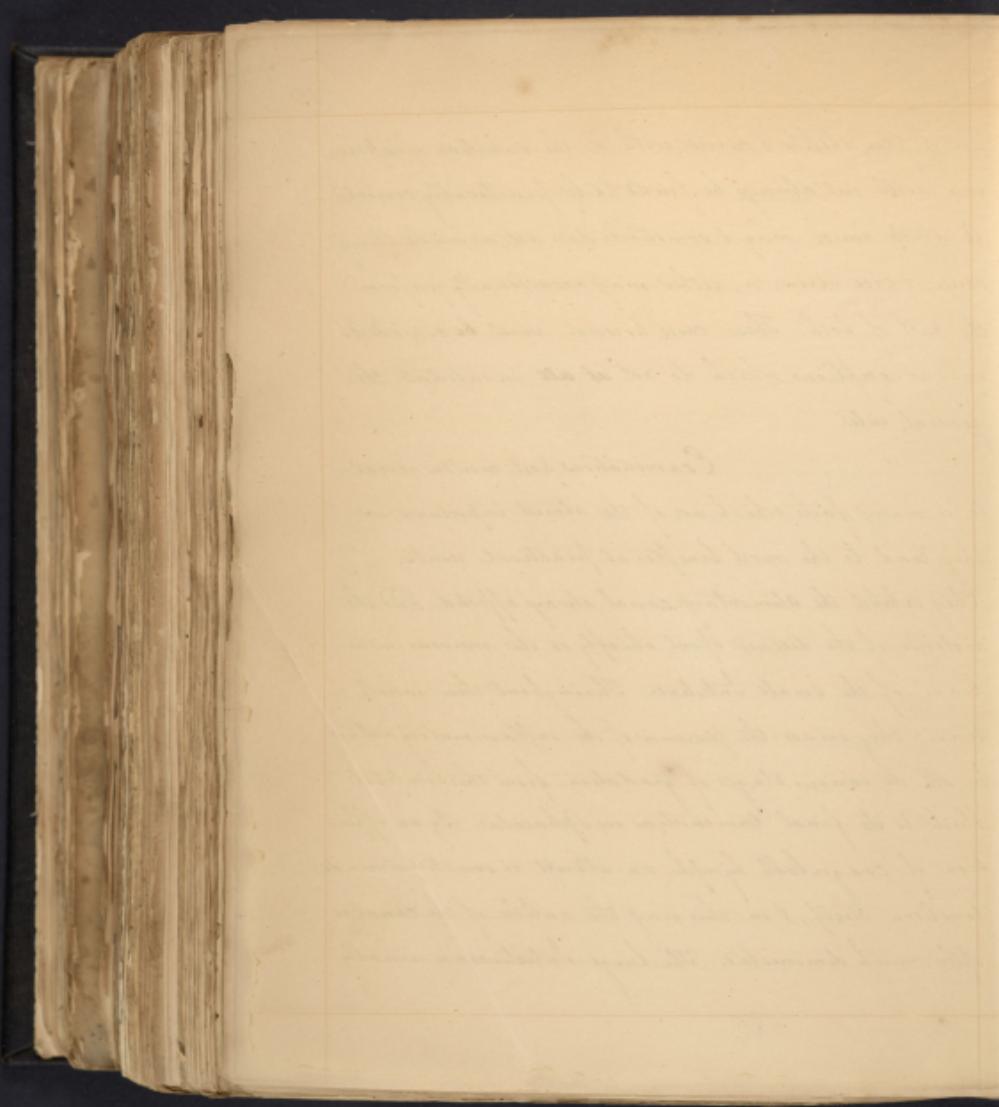
form under which we are considering it.

The last of the Exciting causes which I shall mention, are irregularities in diet. These may consist either in food of an improper quality, or in the too great quantity of that which under ordinary circumstances is wholesome. When the Stomach becomes debilitated by the action of any of the Remote causes, it loses with its healthy tone the capacity of discharging the function which Nature has allotted to it, viz: the perfect digestion of the materials destined to afford a necessary supply of nutriment to the Body. When then, aliment which is in its nature indigestible, or which from its superabundance is oppressive is in this condition received into it, an ineffectual, or at least a laboured effort is made at the due performance of its office. This increased exertion necessarily produces an increased excitement, followed by further depression & loss of power which renders the susceptibility greater, & a repetition in the action of the exciting cause more effectual. But, the whole tract of the alimentary



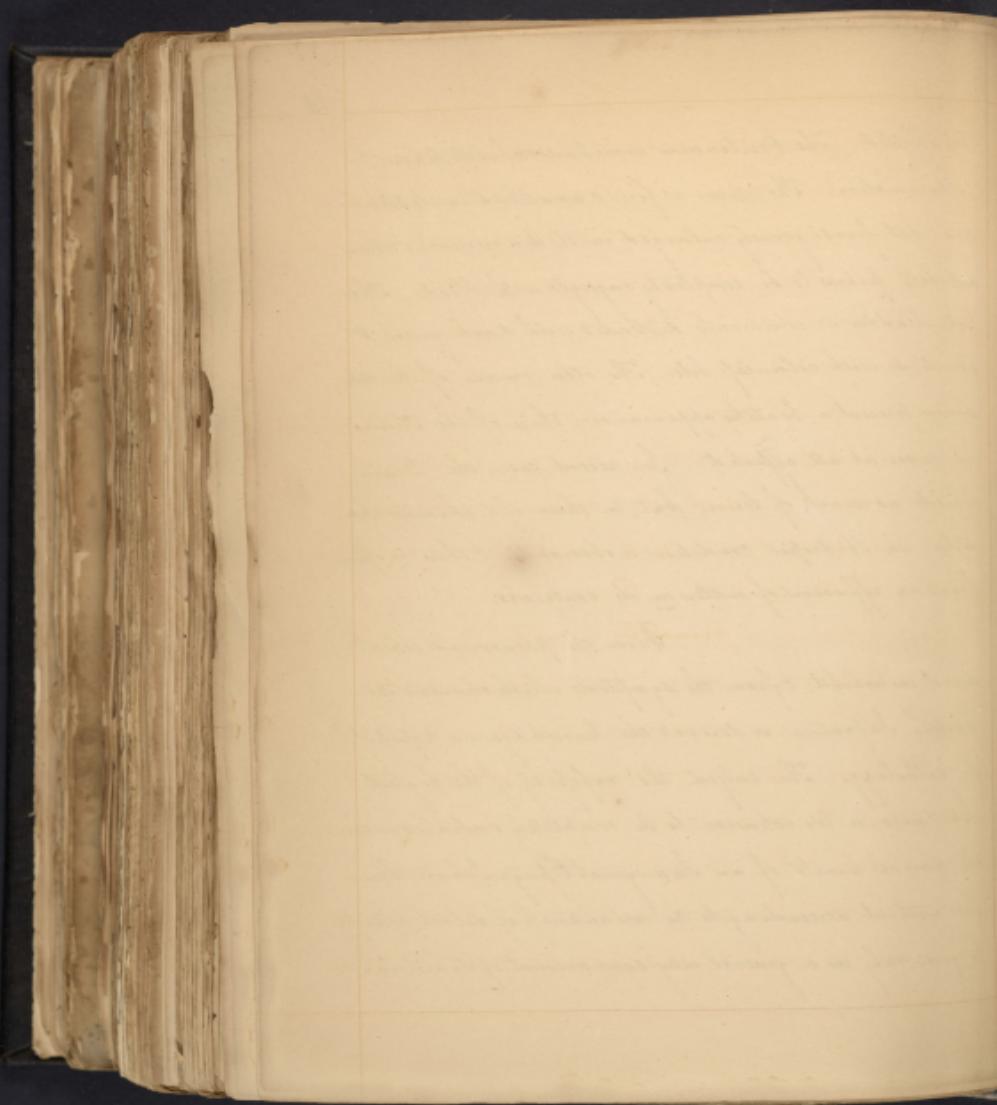
canal from its commencement to its termination, is a scalding surface. Now we know, when any gland or scalding surface is overexcited, the fluid scalded becomes unnatural in quantity a quality, being sometimes increased, sometimes diminished, but always depraved. This is exemplified when the mucous membrane of the nose is acted upon, as in common cold. At first, the membrane is dry & sub-inflamed, afterwards, a more copious secretion than usual comes pouring forth, & of so acid a quality as to excoriate the nose & lips themselves. So it is with the mucous membrane lining the Stomach & Bowels. When inordinately excited by the quality a quantity of the food & drink, the secretions are irregular & morbid; & hence is generated a constant source of irritation in these important organs, a derangement of which forms the first link in the chain of morbid associations which constitute the disease.

In closing my remarks on the causes of Cholera Infantum, I think it proper to add that the division which has been made of them, tho' it wears the



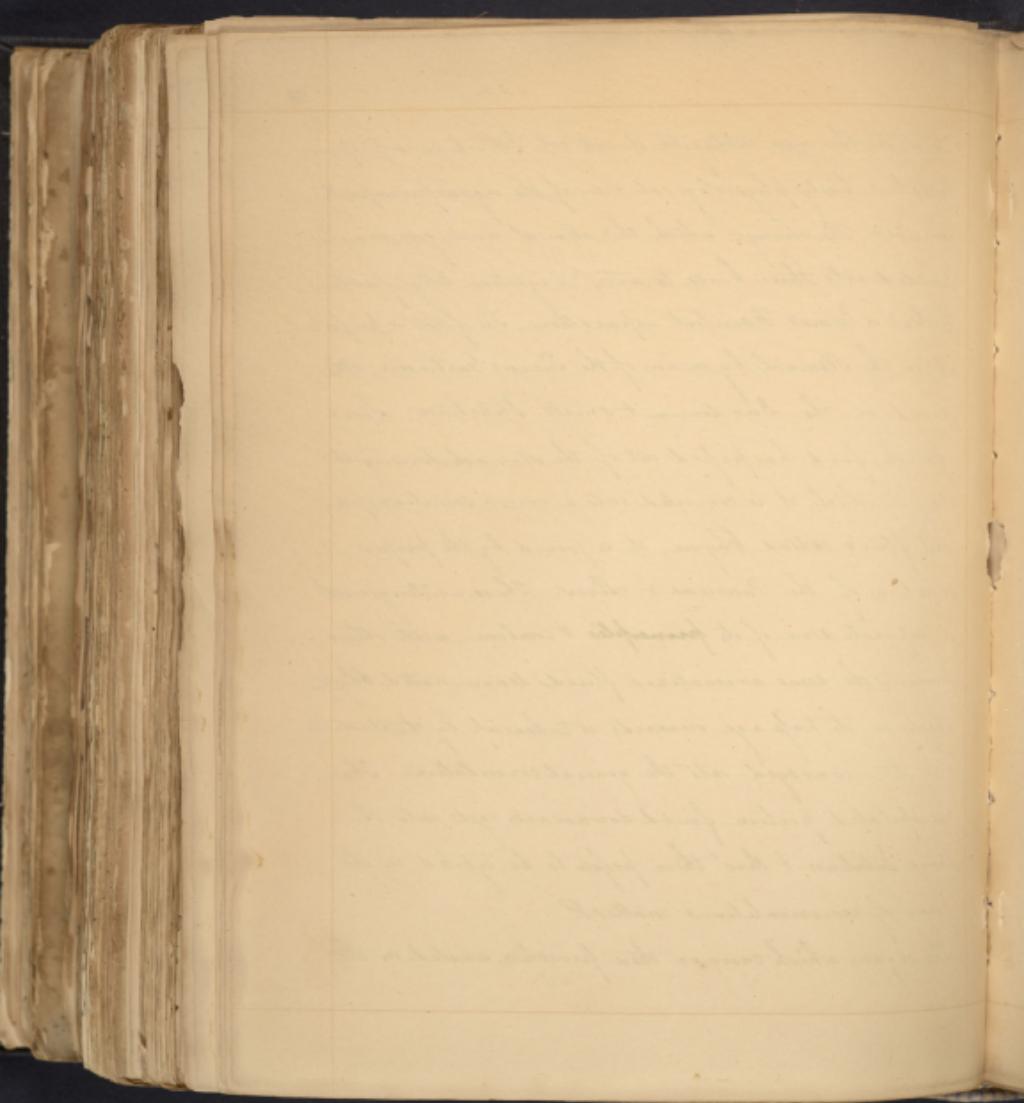
air of plausibility it carries with it the sanction of experience will not always be found to be practically correct. A remote cause may & sometimes does act as an exciting cause, & vice versa; or, either may occasionally perform the part of both. These cases however must be considered only as exceptions which do not at all invalidate the general rule.

Examinations post mortem reveal to us many facts which are of the utmost importance, as they lead to the most beneficial practical results. They exhibit the alimentary canal always affected; and the violence of the disease spent chiefly on the mucous membrane of the small intestines. Throughout their whole tract they evince the presence of the inflammatory action in all its various stages of gradation, from the simplest blush to its final termination in Sphacelus. By an application of coagulable lymph, an attempt is sometimes made to relieve itself, & in this way the calibre of the canal is often much diminished. The large intestines are usually



lip affected. The Peritoneum sometimes exhibits traces of inflammation. The Liver is found unaltered in its structure, but prodigiously enlarged in its dimensions: when cut into proves to be completely engorged with blood. The Gall-bladder is commonly distended with dark green, & sometimes with colour'd bile. The other viscera of the abdomen present a healthy appearance; those of the Throat are never at all affected. In recent cases, the Brain exhibits no mark of lesion; but, in those of a chronic character, an Hydrocephalous condition is observable, & there is often found an effusion of water in its ventricles.

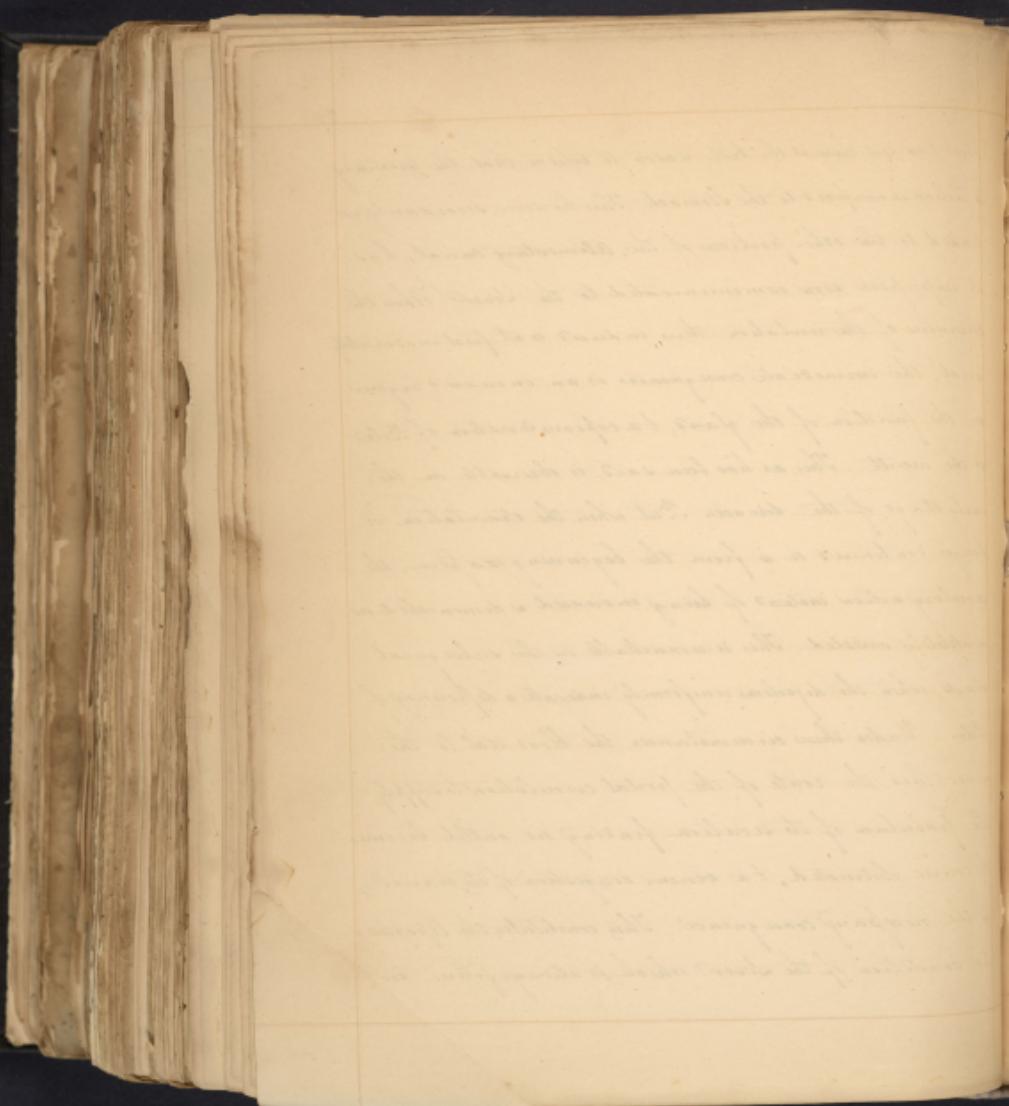
From the phenomena which dissections exhibit, & from the symptoms which characterise Cholera Infantum is derived the knowledge we possess of its pathology. This subject the curiosity of the highest importance, is too extensive to be completely embraced within the narrow limits of an Inaugural Essay. I shall therefore without descending to the minuteness of detail, attempt to give only in a general way some account of its history.



To render this more intelligible it will not I think be improper, to take a hasty physiological view of the organs principally concerned. The changes which the aliment undergoes may be divided into three kinds, to wit, Digestion, Chyleification & what is termed Facultative separation. The first is performed in the Stomach by means of the Succus Gastroicus; the second in the Duodenum & small Intestines. Soon after the food has passed out of the Stomach, during the stay in which it is converted into a viscous, semi-transparent fluid called Chyme, it is joined by the proper excretions of the Pancreas & Liver. These uniting with it, separate some of its principles & combine with others, forming the semi-animalized fluid denominated Chyle, which in its passage onwards, is taken up by the lacteals & by them conveyed into the general circulation. The precipitated portion forced downwards, gets into the large Intestines & thro' them passes to be ejected in the form of excrementitious matter.

The organs which carry on these processes, united in the

closest ties of relationship, are rendered accordant and cooperative by means of a nervous connexion, which for want of a better term is denominated Sympathy. By its agency, the quantity of fluids secreted & the periods of their secretion, are adjusted. Food in the mouth excites by its own impression the action of the salivary glands; and by the same proper stimulus the gastric juices are elaborated. But as the Liver & Pancreas lie out of the reach of direct stimulation, they must be excited into action by an indirect impulse communicated from the Stomach. Now, when any one of these functions becomes deranged, others are liable to be thrown into disorder. Thus the Stomach may be affected by a cause applied directly to it. & a corresponding derangement be thereby induced in the Liver; or, it may become so from a complaint commencing in the latter organ. In practice, it is certainly no easy matter to say in which the complaint does originate. But in the case before us, from a consideration of the history of the symp.



loms & causes, there is the best reason to believe that the primary affection is confined to the Stomach. This however, secondarily extended to the other portions of the alimentary canal, has its unproper seat communicated to the Liver. When the stimulus of the irritation thus induced is at first moderately great, the immediate consequence is an increased vigour in the function of the gland, & a copious excretion of Bile; is the result. This, as has been said, is observable in the early stage of the disease. But when the stimulation is longer continued & is from the beginning expansive, the secretory action instead of being increased is diminished or completely arrested. This is remarkable in the subsequent stages when the defecation uniformly indicates a deficiency of Bile. Under these circumstances, the blood sent to the Liver thro' the route of the portal circulation to supply the substratum of its secretion finding no outlet becomes of course obstructed, & a venous congestion of its branches is the necessary consequence. This constitutes the Aphylocistic condition of the Liver which is always found in

post mortem examinations.

Upon the state of things here indicated, it is then, that our disease chiefly depends; & it is evident, that altho' the Hepatic disorder may have been caused by a similar one in the Stomach, yet that this by a kind of reversed sympathy, may not only keep up, but even aggravate the one which originally produced it.

Among the sympathies by which the Liver is connected with other parts, one of the most remarkable is that in which the Brain is concerned. By it, is to be explained the impression made upon that organ, causing in its inflammation & as its consequence Hydrocephalic effusions, constituting what, as has been said is in protracted cases so often found, namely, Hydrocephalus Internus.

The treatment of Cholera Infantum, formerly confined merely to the exhibition of those remedies which the more prominent symptoms seemed to call for, thence necessarily defective, has given place to a practice founded on more enlightened principles. Instead of

prescribing for symptoms only, the intelligent physician aided by his knowledge of its pathology, is now accustomed to look back to regional causes, & in removing them or in moderating their effects mainly to rely for success.

Besides the treatment which particular symptoms demand, the general indications in the cure appear to be, to allay the vomiting & purging, to correct the disordered action & remove the congestive state of the liver, to cleanse the Bowels of their morbid secretion, to lessen or avoid the causes, & to invigorate the system.

The first indication is generally answered by getting rid of the offending matter. This is usually effected by the administration of a dose of Castor Oil, either alone or combined with a small portion of Laudanum. In the milder cases, this practice may answer very well; but when the vomiting is very excessive, these medicines cannot be retained sufficiently long to produce their desired effects. In that case, our first object must be to abate the excess of action & gastric distress, by recourse to other measures.

Among these may be mentioned as particularly useful, equal parts of Lime Water & milk, a strong infusion of Coffee without cream or sugar, Bitter water, the following draught, anodyne oenemata, fermentation or the cloe bay or spiced plasters to the Epigastrium, the warm bath &c &c. When however, the Liver has felt the impression & there is reason to believe its reflected action augments the violence of the gastric affection, the most certainly effectual means of calming its irritation, is Calomel exhibited in the minutest doses, such the 5. 5. & a even the ^{1/2} of a grain.

Having by these means succeeded in quieting the Stomach, an attempt should next be made to evacuate the Bowels. In the selection of the medicine most proper for this purpose, there may be some choice. Castor Oil is commonly preferred, but Calomel combined with Opium is perhaps better, as it is not apt to be ejected, but operates well, & effectually allays any spasmodic action which may happen to exist. This treatment however will not be found uniformly applicable; for says Dr. Chapman, "when there are

besides the gastric uneasiness & vomiting, great pain about the Umbilicus & quicke, irritatid pulse, it becomes necessary to premise an Emetic. It may be useful even in the subsequent stages, but is chiefly so at the commencement of an attack, when by cleansing the Stomach of the morbid secretion which is then always present in it, the source of irritation is thereby apparently cut off.

From a consideration of the Pathology of Cholera Infantum, it is evident that while the irritation & derangement of the Hepatic apparatus continues, all our remedies, either addroped to the alimentary canal or applied in any other way, must be considered as palliative only. It becomes necessary therefore early to attend to the second Indication. Among the remedies whose operation affects the Liver, the only one which can be said to exert a specific action on it, is Mercurij. This remedy has the extraordinary but now well-known power (mentioned first it is said, by Dr. Ayle of Hull, in his treatise on Morassus) of increasing its secretion when deficient, & of restraining

it when exasperate. To attain the former, is exactly what in this case is desirable; for we can renew the excretory function of the gland, we restore its healthy action, and thereby not only get rid of the congestion, but alter the diseased impression of the external surface depending upon its derangement. The preparation of Mercury shown for this purpose is the Sulphuriate, which should be given in doses so regulated as to obtain its specific action and to produce an astringent effect only. When thus administered & its use persevered in, it never fails to bring down a free discharge of yellow bile, the appearance of which should be hailed as the most auspicious omen.

During the continuance of the disease there will be as its necessary consequence, repeated accumulations of morbid matter in the Intestines. As these would but increase the irritation & aggravate the violence of the complaint, it becomes proper that they should from time to time be evacuated. This may be effected either by purges or Calomel followed by some one of the cathartical salts, or

by the latter medicine alone; or by Castor Oil, Magnesia &c &c. It is recommended, very properly, that the purging be not carried too far; lest the irritation already too great be both continued & augmented. The medicine therefore should be so administered as to produce an evacuant effect merely. It would perhaps be well if we could dispense with the employment of Cathartics in these cases altogether; but as the injurious results of their operation, are more sufferable than the effects of an accumulation of the morbid secretions which they are intended to remove, it becomes a matter of prudence of the two evils to choose the least. "Calomel" says Dr. Miller "is more especially indicated in that form of the disease where a Tumor is accompanied with Diarrhea. In these cases a repetition is most necessary, & when combined with Opium, it seems to possess a specific property."

Emetics in every stage of the complaint have been highly recommended by Dr. Mann of Alsfach in Silesia. In the beginning, as evacuants they are sometimes

undoubtedly useful, & at a subsequent period by the influence they exert over the Liver will frequently prove beneficial.

To compose the system as well as a prudential remedy against inflammation, Nonsection in the commencement of an attack has been advised by the best authorities. In consequence however of the sudden prostration which is liable to ensue, the Lancet should be resorted to only with the greatest circumspection.

To correct acidity, minute doses of Mag. Nat: or a solution of a Carbonate of either of the fixed alkalies will be found exceedingly useful.

The inequality in the temperature of the surface depending most commonly on the Hæmætic derangement, will generally disappear when that is removed & cannot be permanently remedied before. Temporary relief may however be obtained by the repeated use of the warm bath, which is rendered more beneficial perhaps, by the addition of Salt, Mustard, Pepper or Brandy. To

allay pain it is still more valuable.

By the action of their counter stimulation, Blisters to the Epigastrium are highly important. They remove pain & moderate inflammation & are useful at every stage of the disease.

When the Diarrhoea is accompanied by Terminal Tenesmus, doses of the Cutaceous or Testaceous Jupit are necessary to restrain the discharges, & emollient anodyne injections will be demanded for the relief of the latter symptoms.

Simple, profuse Diarrhoea arising from mere relaxation & debility of the Bowels, is in general successfully treated by Astringents. Among these may be reckoned Alum, Copperas, Chalk, Sulphuric Acid, Kino, Calochu, Geranium & Laculatum; the toasted & the spiced Rhubarb, the infusion of Galls, of Logwood $\frac{1}{2}$ lb.

What however is in most instances preferable to either of these is an infusion of the Dewberry root, or a decoction of the rind of the Pomegranate in new milk.

In most of these remedies, Sardanum may be added with the greatest advantage. The Verbaintheate, preparations have been highly extolled, & common Resin is said to be sometimes very effectual in restraining of the mucous discharge.

At every period of the complaint, the clothing of the child should be strictly attended to. Its body & extremities ought to be completely covered by fine flannel or fluey houcrys, well fitted & accurately adjusted. The flannel Roller as first recommended by Dr. Chapman & now commonly used in Diarrhoea, should prove here highly beneficial. It is almost superfluous to add, that a scrupulous regard to neatness, cleanliness, is impiously demanded.

The diet too, deserves attention. If the child be weaned, his food should consist of the lightest & most digestible articles, such as Page, Tapioca, Arrow-root &c &c with a proper proportion of new milk. In feeding the child, care is required lest its Stomach be overloaded & oppressed by too great a quantity. Chocolate, Coffea, Soaps, &c

a general rule, fruit & meats of every kind are indismissible.

Whatever be our exertions however judicious our treatment, they will often prove ineffectual as long as the causes which produce the disease continue to operate. Attention therefore should be duly paid to their removal. If the patient live in a City, he should be immediately taken to the Country. When this advantage cannot be commanded, a frequent change of air with exercise, as by riding in an open carriage, or by the motion of a boat as in rowing or sailing, is highly serviceable.

When the progress of the disease has been arrested by the measures I have here attempted to indicate, the cure must be completed. Health re-established by the usual corroborant means; of these I would recommend as exceedingly efficacious a cold infusion of Red bark & Virginia Snake-root.

In conclusion it only remains for me to mention the means by which the disease is to be

avoided. A knowledge of its history teaches very explicitly its Prophylaxis. The most important preventives appear to be the following: 1st Imparting tone & vigour to the system by the daily use of the cold bath. 2nd Attention to change the dress of children with the changes in the weather, always having them sufficiently warm. 3rd Attention to diet. The proper food for an infant, is its mother's milk; it should therefore not be weaned within the year. When children have left the breast, they should be fed on milk & on farinaceous vegetables boiled, and occasionally allowed a small portion of salted animal food. 4th Attention to the progress of dentition. The gums should be often examined, & when they are swollen & produce much pain, they should be lanced; & the incision be made deep enough to penetrate the capsule. 5th Attention to cleanliness. 6th Above all, the removal of children to the Country on the approach of warm weather.

